



MACHAKOS UNIVERSITY

University Examinations for 2022/2023 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF HEALTH SCIENCES

SECOND YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (FOODS, NUTRITION AND DIETETICS)

HFN 246: NUTRITION ASSESSMENT

DATE:

TIME:

INSTRUCTIONS:

This paper consists of two sections A and B

SECTION A

- **This section has one question**
- **The question is compulsory**
- **The question is 30 marks**

QUESTION ONE

- Giving examples differentiate between direct and indirect nutrition assessment methods (3 marks)
- Define nutrition assessment (3 marks)
- Highlight three (3) purposes of dietary assessments in the community (3 marks)
- Identify the 6 Ps determinants of Malnutrition (3 marks)
- Explain why anthropometric measures except MUAC are not ideal in nutrition assessments in pregnant women (3 marks)
- Explain the challenges associated with biochemical/laboratory nutrition assessment methods (3 marks)

- g) Alex is 1.7m tall and weighs 102 Kgs. Calculate his Body mass index and determine his nutritional status. (2 marks)
- h) Using the reference chart provided, determine the nutrition status (SD deviations) of the following children
- i. Bob, three-year-old boy weight 4.5kg height is 60cm.
 - ii. Maria, 9 months, Weight 5.5 kg height 58 cm (2 marks)
- i) During screening, Mwikali a pregnant woman was found to have a MUAC measurement of 17cm. Interpret her nutrition status. (2 marks)
- j) Identify three (3) disadvantages of anthropometric assessment measures (3 marks)
- k) Highlight the disadvantages of dietary records as a tool in nutrition assessment. (3 marks)

SECTION B: ANSWER ANY TWO QUESTIONS. EACH QUESTION CONTAINS 20 MARKS

- This section has four (4) questions
- Answer any two (2) questions
- Each question is 20 marks

QUESTION TWO (20 MARKS)

- a) Discuss the importance of nutrition assessments in any community (10 marks)
- b) Discuss the process of using the 24 hour dietary recall as a nutrition assessment method (10 marks)

QUESTION THREE (20 MARKS)

- a) Using the UNICEFs conceptual framework as a basis, discuss the causes of malnutrition (12 marks)
- b) The food frequency questionnaire has been used as a tool for dietary assessment. Design a sample food frequency questionnaire and describe how it is used (8 marks)

QUESTION FOUR (20 MARKS)

- a) You have been invited to Mutituni community to carry out a clinical nutrition assessment exercise. The following are some of the clinical signs you notice. For each of the signs indicate a possible nutrient deficiency
- i. Pallor
 - ii. Goiter
 - iii. Bitot's spots
 - iv. Bilateral pitting oedema
 - v. Severe visible wasting
 - vi. Bleeding and spongy gums
 - vii. Spooning of nails
 - viii. Bow legs
 - ix. Sparse and thin hair
 - x. Glossitis
- (10 marks)
- b) Describe the dietary assessment principles applied in Nutrition assessments (10 marks)

QUESTION FIVE (20 MARKS)

- a) Describe the three (3) non-nutritional methods of nutrition assessment that can be used as proxy indicators of nutritional status (12 marks)
- b) Describe the advantages and disadvantages of each of the following dietary assessment methods
- i. Diet history
 - ii. Food frequency questionnaire
 - iii. Food records
- (8 marks)